Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original) A method for decoding received sums of QPSK-modulated spreading codes corresponding to elements of CFC codewords, comprising:

(a) despreading received sums of QPSK-modulated spreading codes with each of said spreading codes;

(b) forming linear combinations with coefficients ± 1 and $\pm j$ of the results of step (a), said combinations corresponding to possible sums as elements of CFC codewords;

(c) finding the maximum of said combinations of step (b);

(d) determining a codeword and cyclic shift from the results of step (c).

Claim 2 (new) The method of claim 1, wherein:

(a) said sums of step (a) of claim 1 are each sums of three QPSK-modulated spreading codes.

Claim 3 (new) The method of claim 2, wherein:

(a) said sums of step (a) of claim 2 are selected from the group consisting of the sums indicated in slot columns of Figure 1b wherein C_0, C_1, ..., C_{11} represent said spreading codes.

Claim 4 (new) The method of claim 2, wherein:

(a) said sums of step (a) of claim 2 are selected from the group consisting of the sums indicated in the slot columns of Figure 6 wherein C_0, C_1, ..., C_5 represent said spreading codes..

Claim 5 (new) The method of claim 2, wherein:

(a) said sums of step (a) of claim 2 are selected from the group consisting of the sums indicated in the slot columns of Figure 7a wherein C_0, C_1, ..., C_{15} represent said spreading codes..

Claim 6 (new) The method of claim 1, wherein:

(a) said sums of step (a) of claim 1 are in time slots of a time-division-duplex transmission.

Claim 7 (new) A method for frame synchronization in a time-division duplex code division multiple access system, comprising:

(a) correlating, with each of a set of synchronization codes, received linear combinations of said synchronization codes in time slots, said linear combinations elements of an alphabet for codewords of a common-free code (CFC);

(b) determining a codeword from the results of step (a);

(c) determining frame synchronization from the results of step (b).

Claim 8 (new) The method of claim 7, wherein:

(a) said linear combinations of step (a) of claim 7 are selected from the group of linear combinations of the form $b_1c_1 + b_2c_2 + b_3c_3$ where each of said b_1, b_2, and b_3 is equal to one of ± 1 or $\pm j$, and where each of said c_1, c_2, and c_3 is selected from said set of synchronization codes.

Claim 9 (new) The method of claim 8, wherein:

(a) said codewords of step (a) of claim 7 have length 4; and

(b) said linear combinations of step (a) of claim 8 are indicated in Figure 1b where said C_0, C_1, ..., C_{11} represent said set of synchronization codes.

Claim 10 (new) The method of claim 8, wherein:

(a) said codewords of step (a) of claim 7 have length 2; and

(b) said linear combinations of step (a) of claim 8 are indicated in Figure 6 where said C_0, C_1, ..., C_5 represent said set of synchronization codes.

Claim 11 (new) The method of claim 8, wherein:

(a) said codewords of step (a) of claim 7 have length 4; and

(b) said linear combinations of step (a) of claim 8 are indicated in Figure 7a where said C_0, C_1, ..., C_{15} represent said set of synchronization codes.